EAST BAY
MUNICIPAL UTILITY DISTRICT

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Mr. Michael Baes (mbaes@oehha.ca.gov)
Pesticide and Environmental Toxicology Branch
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency
1515 Clay St., 16th floor
Oakland, CA 94612

Attn: Perchlorate PHG Project

Dear Mr. Baes:

RE: Review and Comments on OEHHA Perchlorate Public Health Goal (PHG) Report (January 2011)

The East Bay Municipal Utility District provides drinking water to 1.4 million customers in Alameda and Contra Costa counties. Our 325 square mile service area covers a large portion of the eastern side of San Francisco Bay. As a water supplier, we must follow the reporting and public notification requirements associated with the Public Health Goals (PHGs) as well as the maximum contaminant level (MCL) developed using the PHG report.

We appreciate the opportunity to comment on this document. In addition to our support of the Association of California Water Agencies (ACWA) letter, we submit the following recommendations for your consideration:

1. The "Environmental Occurrence and Human Exposure" section should include a discussion of sodium hypochlorite as a source of perchlorate[1]. The report section focuses on perchlorate as an industrial contaminant appearing in source waters resulting from industrial activity. However, the work done by Stanford et. al. clearly demonstrated that perchlorate can also be produced by the breakdown of sodium hypochlorite. Since sodium hypochlorite is used as a primary disinfectant and is often the final step in the water treatment process, this perchlorate source must be acknowledged in the report.

2. Given the above, OEHHA should incorporate a microbiological risk component into the discussion. Under Section 116365 of the California Health and Safety Code, OEHHA is required to ". . .prepare and publish an **assessment of the risks to public health** posed by each contaminant for which the department proposes a drinking water standard. [emphasis added]." The statutory language also requires the risk assessment encompass ". . .possible synergistic effects resulting from exposure to, or interaction with, two or more contaminants."

(Health and Safety Code Section 116365 (c) l (C)i). Under the Health and Safety Code (Section 116275 (a)) the term "contaminant" covers ". . . any physical, chemical, biological, or radiological substance or matter in water."

The perchlorate risk assessment should include the microbiological risks[2] mitigated by current disinfection practices and compare that risk to the health risk associated with the introduction of perchlorate from sodium hypochlorite. In this way OEHHA can ensure that their risk assessment will provide risk managers with the necessary tools and information needed to balance microbial and chemical contaminant risks when revising the perchlorate PHG and reexamining the perchlorate MCL. Incorporating the interaction between the chemical and microbiological risk endpoints in the perchlorate risk assessment will produce a more balanced document that will remain based solely on public health considerations and defensible under the statutory criteria.

In 1999, the Centers for Disease Control (CDC) published a series of articles in their weekly publication "Morbidity and Mortality Weekly Report" (MMWR) discussing each of the top 10 public health achievements in the 20th century. The July 30, 1999 MMWR issue[3] discussed infectious disease control as one such achievement, identifying chlorination of drinking water as one of the primary barriers responsible for stemming waterborne disease outbreaks. To evaluate the risks associated with perchlorate without considering the public health ramifications due its presence in disinfectants, such as sodium hypochlorite, would not be in the best interests of public health.

3. Under the Health and Safety Code, water utilities detecting contaminants above the PHG are required to publish a public report detailing what the utility is doing to lower the contaminant concentration and why. As the agency responsible for the assessment of risk to public health, OEHHA must acknowledge both the chemical and microbiological risks. This will contribute to the public's understanding of balancing the chronic chemical risks and the acute threat of waterborne disease.

4. The District like many water utilities around the state, switched from gaseous chlorine to sodium hypochlorite for public safety reasons. Recent chemical security legislation has brought the use of gaseous chlorine under greater scrutiny. Since our water treatment plants are often located in suburban residential neighborhoods, bringing in and storing tanker trucks or rail cars containing gaseous chlorine would pose an additional risk to health and safety. The threats to public safety by switching back to gaseous chlorine should be included in the perchlorate risk assessment.

Thank you for considering these comments. If OEHHA is interested in opening a dialog to discuss possible approaches to resolve this issue, we are willing to meet with staff and offer any assistance in this effort. Should you have any additional questions, please contact me (510.287.1338; rhunsing@ebmud.com) or Dr. Richard Sakaji (510. 287.0964; rsakaji@ebmud.com).

Sincerely,

Ron Hunsinger
Manager Water Quality

References

1 Stanford, B.D.; Pisarenko, A.N.; Snyder, S.A.; & Gordon, G., 2011. Perchlorate, Bromate, and Chlorate in Hypochlorite Solutions: Guidelines for Utilities. *Jour. AWWA* (article in press).

2 USEPA "Protocol for Microbial Risk Assessment to Support Human Health Protection for Water-Based Media (DRAFT)," July 30, 2009, Office of Science and Technology Office of Water U.S. Environmental Protection Agency Washington, DC 20460. (*http://yosemite.epa.gov/sab/sabproduct.nsf/0/DADB7C7D689EA5C585257536006 14BBA/$File/Draft+MRA+Protocol+July+30+2009+for+DWC+Sept+21-22+2009+Meeting.pdf*)

3 Centers for Disease Control (CDC)
"Achievements in Public Health, 1900-1999: Control of Infectious Diseases," Morbidity and Mortality Weekly Report, 48(29) July 30, 1999.
(http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a1.htm)